



Mechanical and Aeronautical Engineering Department  
University of California Davis  
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## 2002-2003 Monthly Seminar Series on Space Research

3<sup>rd</sup> Thursday 3:00-4:00 pm

### ***Space Shuttle Atmospheric Re-Entry; Technology and Technique***

***Dr. Stephen K. Robinson***  
*NASA Astronaut*

Date: **15 May 2003\_Thursday**    Time: **3:10-4:00 pm**    Location: **1062 Bainer**  
Refreshments will be provided at 3:00 p.m.

#### **ABSTRACT**

An overview of the re-entry and landing process for the Space Shuttle will be given, from the operational standpoint of an astronaut. Issues including aerodynamics, guidance, navigation, and control will be included, and questions relevant to the Columbia investigation will be discussed. Questions and comments from students are especially encouraged.

#### **ABOUT THE SPEAKER**

Stephen Robinson was born in Sacramento, California and received a B.S. degree in mechanical/aeronautical engineering from the University of California at Davis. After graduation from U.C. Davis, he joined NASA Ames Research Center as a research scientist in the fields of fluid physics, turbulence modeling, and aerodynamics. While at Ames, he earned an M.S. and Ph.D. degrees in mechanical engineering from Stanford University. After 11 years at Ames, Robinson was selected as Chief of the Experimental Flow Physics Branch at NASA's Langley Research Center in Hampton, Virginia, which conducted research in aerodynamics and fluid physics. He was later assigned to the Massachusetts Institute of Technology as Visiting Engineer in the Man Vehicle Laboratory, where he conducted neurovestibular research on the astronauts of the Spacelab Life Sciences 2 Shuttle mission (STS-58), as well as research on EVA dynamics for satellite capture and space construction. Robinson returned to NASA Langley where he accepted a dual role as research scientist in the Multidisciplinary Design Optimization Branch and as leader of the Aerodynamics and Acoustics element of NASA's General Aviation Technology Program. He was selected to be an astronaut by NASA in 1994. He flew on STS-85 (1997) aboard Discovery performing scientific experiments and robot arm tests in support of Space Station construction. On his second Space Shuttle mission, STS-95 (1998), Robinson served as the Payload Commander for a science mission to study material sciences, astronomy, and human physiology. He has logged over 497 hours in space. On STS-114, Robinson is Flight Engineer, robot arm operator, and will perform 3 spacewalks on the International Space Station.

#### ***For more information about***

***SpaceED (Space Engineering Research and Graduate Program) or the seminars please contact  
Professor Nesrin Sarigul-Klijn at (530)-752-0682 or [nsarigulklijn@ucdavis.edu](mailto:nsarigulklijn@ucdavis.edu)***

Members of the campus community and visitors from the region are welcome to attend the seminar series.  
Sign-in is required at the event. SpaceED seminar will replace MAE297 seminar on 3<sup>rd</sup> Thursdays.